

(i) Federal research, development, and deployment efforts to optimize methods for extractions, concentration, separation, and purification of conventional, secondary, and unconventional sources of critical minerals, including research that prioritizes end-to-end integration of mining and recycling techniques and the end-use target for critical minerals;

(ii) efficient use and reuse of critical minerals, including recycling technologies for critical minerals and the reclamation of critical minerals from components such as spent batteries;

(iii) research, development, and deployment of materials and technologies that can be used in place of technologies utilizing critical minerals, such as battery or energy storage technologies that minimize or do not incorporate critical minerals;

(iv) addressing the technology transitions between research or lab-scale mining and recycling and commercialization of these technologies;

(v) the critical minerals workforce of the United States; and

(vi) United States private industry investments in innovation and technology transfer from federally funded science and technology;

(B) to identify emerging opportunities, stimulate international cooperation, and foster the development of secure and reliable supply chains of critical minerals, including activities related to the reclamation of critical minerals via recycling and research and development of alternative technologies;

(C) to ensure the transparency of information and data related to critical minerals; and

(D) to provide recommendations on coordination and collaboration among the research, development, and deployment programs and activities of Federal agencies to promote a secure and reliable supply of critical minerals necessary to maintain national security, economic well-being, and industrial production.

(3) RESPONSIBILITIES.—In carrying out paragraphs (1) and (2), the Subcommittee may, taking into account the findings and recommendations of relevant advisory committees—

(A) provide recommendations on how Federal agencies may improve the topographic, geologic, and geophysical mapping of the United States and improve the discoverability, accessibility, and usability of the resulting and existing data, to the extent permitted by law and subject to appropriate limitation for purposes of privacy and security;

(B) assess the progress toward developing critical minerals recycling and reprocessing technologies, and alternative technologies;

(C) assess the end-to-end lifecycle of critical minerals, including for mining, usage, recycling, and end-use material and technology requirements;

(D) examine options for accessing and developing critical minerals through investment and trade with allies and partners of the United States and provide recommendations;

(E) evaluate and provide recommendations to incentivize the development and use of advances in science and technology in the private industry;

(F) assess the need for and make recommendations to address the challenges the United States critical minerals supply chain workforce faces, including—

(i) aging and retiring personnel and faculty;

(ii) public perceptions about the nature of mining and mineral processing; and

(iii) foreign competition for United States talent;

(G) develop, and update as necessary, a strategic plan to guide Federal programs and activities to enhance—

(i) scientific and technical capabilities across critical mineral supply chains, including a roadmap that identifies key research and development needs and coordinates ongoing activities for source diversification, more efficient use, recycling, and alternative technologies; and

(ii) cross-cutting mining science, data science techniques, materials science, manufacturing science and engineering, computational modeling, and environmental health and safety research and development; and

(H) report to the appropriate committees of Congress on activities and findings under this subsection.

(4) MANDATORY RESPONSIBILITIES.—In carrying out paragraphs (1) and (2), the Subcommittee shall, taking into account the findings and recommendations of the relevant advisory committees, identify and evaluate Federal policies and regulations that restrict the mining of critical minerals.

(c) GRANT PROGRAM FOR DEVELOPMENT OF CRITICAL MINERALS AND METALS.—

(1) ESTABLISHMENT.—The Secretary of Commerce, in consultation with the Director, the Secretary of the Interior, and the heads of other relevant Federal agencies, shall establish a grant program to finance pilot projects for the development of critical minerals and metals mining, recycling, and alternative technologies research and development in the United States.

(2) LIMITATION ON GRANT AWARDS.—A grant awarded under paragraph (1) may not exceed \$10,000,000.

(3) ECONOMIC VIABILITY.—In awarding grants under paragraph (1), the Secretary of Commerce shall give priority to projects that the Secretary of Commerce determines are likely to be economically viable over the long term.

(4) SECONDARY RECOVERY.—In awarding grants under paragraph (1), the Secretary of Commerce shall seek to award not less than 30 percent of the total amount of grants awarded during the fiscal year for projects relating to secondary recovery of critical minerals and metals.

(5) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the Secretary of Commerce \$100,000,000 for each of fiscal years 2021 through 2024 to carry out the grant program established under paragraph (1).

(d) DEFINITIONS.—In this section:

(1) ALTERNATIVE TECHNOLOGIES.—The term “alternative technologies” means the development of substitute materials that can substantially satisfy the metrics of the end-use application by either significantly minimizing or completely eliminating the need for critical minerals.

(2) CRITICAL MINERAL; CRITICAL MINERAL OR METAL.—The terms “critical mineral” and “critical mineral or metal” include any host mineral of a critical mineral (within the meaning of those terms in section 7002 of the Energy Act of 2020 (30 U.S.C. 1606)).

(3) END-TO-END.—The term “end-to-end”, with respect to the integration of mining or life cycle of minerals, means the integrated approach of, or the lifecycle determined by, examining the research and developmental process from the mining of the raw minerals to its processing into useful materials, its integration into components and devices, the utilization of such devices in the end-use application to satisfy certain performance metrics, and the recycling or disposal of such devices.

(4) RECYCLING.—The term “recycling” means the process of collecting and processing spent materials and devices and turning them into raw materials or components

that can be reused either partially or completely.

(5) SECONDARY RECOVERY.—The term “secondary recovery” means the recovery of critical minerals and metals from discarded end-use products or from waste products produced during the metal refining and manufacturing process, including from mine waste piles, acid mine drainage sludge, or byproducts produced through legacy mining and metallurgy activities.

SA 1812. Mr. REED submitted an amendment intended to be proposed to amendment SA 1502 proposed by Mr. SCHUMER to the bill S. 1260, to establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes; which was ordered to lie on the table; as follows:

On page 1146, beginning on line 20, strike “United States; and” and all that follows through “(2) be for” on line 21 and insert the following: “United States;

(2) ensure the retention of jobs at manufacturing facilities that have been active in the production of personal protective equipment within the year preceding the date of the enactment of this Act; and

(3) be for

SA 1813. Mr. REED submitted an amendment intended to be proposed to amendment SA 1502 proposed by Mr. SCHUMER to the bill S. 1260, to establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes; which was ordered to lie on the table; as follows:

At the end of division A, insert the following:

SEC. 1004. TAXPAYER PROTECTIONS.

The head of the relevant Federal agency or department may receive warrants, options, preferred stock, debt securities, notes, or other financial instruments issued by recipients of financial assistance made available under section 1002 or 1003, which, in the sole determination of the head of the Federal agency or department, provide appropriate compensation to the Federal Government for the provision of the financial assistance.

SA 1814. Mr. REED submitted an amendment intended to be proposed to amendment SA 1502 proposed by Mr. SCHUMER to the bill S. 1260, to establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes; which was ordered to lie on the table; as follows:

On page 347, strike lines 2 and 3 and insert the following:

economy of the United States.”;

(2) in subsection (a), by adding at the end the following:

“(6) **TAXPAYER PROTECTIONS.**—The Secretary may receive warrants, options, preferred stock, debt securities, notes, or other financial instruments issued by covered entities that receive a financial assistance award under this subsection which, in the sole determination of the Secretary, provide appropriate compensation to the Federal Government for the provision of the financial assistance award.”; and

(3) by adding at the end the following:

SA 1815. Mr. REED submitted an amendment intended to be proposed to amendment SA 1502 proposed by Mr. SCHUMER to the bill S. 1260, to establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes; which was ordered to lie on the table; as follows:

At the end of subtitle C of title I of division D, add the following:

SEC. 1. PROHIBITION ON PROCUREMENT OF PERSONAL PROTECTIVE EQUIPMENT MANUFACTURED IN CHINA.

No Federal funds may be used to procure personal protective equipment manufactured in the People's Republic of China or in any facility owned or controlled by the Chinese Communist Party.

SA 1816. Mr. KELLY (for himself and Ms. SINEMA) submitted an amendment intended to be proposed by him to the bill S. 1260, to establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes; which was ordered to lie on the table; as follows:

At the appropriate place, insert the following:

SEC. _____. IMPROVEMENTS RELATING TO NATIONAL NETWORK FOR MICROELECTRONICS RESEARCH AND DEVELOPMENT.

Section 9903(b) of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116-283) is amended—

(1) in paragraph (1), in the matter before subparagraph (A), by striking “may” and inserting “shall”; and

(2) by adding at the end the following new paragraphs:

“(3) **STRUCTURE.**—(A) In carrying out paragraph (1), the Secretary shall, through a competitive process, select—

“(i) three eligible entities to carry out the core activities described in paragraph (2) as part of the network established under paragraph (1);

“(ii) up to ten eligible entities to carry out the hub activities described in paragraph (2) as part of the network established under paragraph (1);

“(iii) an eligible entity—

“(I) to conduct the competition for selecting the core activities and the hub activities; and

“(II) establishing and managing the network established under paragraph (1).

“(B) The Secretary shall ensure that the eligible entities selected under subparagraph (A) collectively represent the geographic diversity of the United States.

“(C) The Secretary shall ensure that each eligible entity selected under subparagraph (A) leads a distinct area of research determined by the Secretary.

“(D) In carrying out activities described in paragraph (2) as part of the network established under paragraph (1), an eligible entity selected under subparagraph (A) may award a subcontract to an additional entity to carry out work on behalf of the eligible entity.

“(E)(i) In this paragraph—

“(I) a core activity is an activity that is capable of producing 300 millimeter silicon wafers to enable direct technology transfer to domestic state of the art fabricators of silicon wafers; and

“(II) a hub activity is an activity specialized in one or more microelectronics innovation areas and is capable of producing 200 millimeter silicon wafers to enable technology transfer to a core activity.

“(ii) For purposes of this paragraph, both core activities and hub activities are activities that support the maturation and transfer of leap ahead, new computing concepts, devices and materials, and beyond approaches, in effect as of the date of the enactment of this paragraph, for the complementary-symmetry metal-oxide-semiconductor (CMOS) fabrication process.

“(4) **ELIGIBLE ENTITIES.**—(A) For purposes of clauses (i) and (ii) of paragraph (3)(A), an eligible entity is—

“(i) an institution of higher education (as defined in section 102 of the Higher Education Act of 1965 (20 U.S.C. 1002)); or

“(ii) a consortium led by an institution of higher education (as so defined) and one or more nonprofit or not-for-profit research institutions, operators of a federally funded research and development center, or for-profit entities.

“(B) For purposes of paragraph (3)(A)(iii), an eligible entity is a suitably qualified nonprofit or governmental organization.

“(5) **PRIORITY.**—In selecting eligible entities under paragraph (3)(A), the Secretary shall give priority to eligible entities that are located in close proximity to existing semiconductor manufacturing and research and development entities.”.

SA 1817. Mr. BURR (for himself, Mr. BLUNT, and Mr. RISCH) submitted an amendment intended to be proposed by him to the bill S. 1260, to establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes; which was ordered to lie on the table; as follows:

At the appropriate place, insert the following:

SEC. _____. UNITED STATES EMERGENCY PLAN FOR COVID-19 VACCINES.

(a) **IN GENERAL.**—The Secretary of State shall, as appropriate, provide assistance to prevent, mitigate, and respond to the COVID-19 pandemic through the purchase

and delivery of vaccines to regions or countries affected by, or at risk of, COVID-19. The Secretary—

(1) may provide such assistance through existing bilateral or multilateral agreements;

(2) shall maximize public-private partnerships in the purchase and delivery of such vaccines; and

(3) shall furnish such assistance, consistent with subsection (b) and on such terms as the Secretary may determine, to support global health security and to prevent and mitigate the spread of COVID-19.

(b) **REQUIREMENTS.**—As a condition of receipt of vaccines provided for under this section, a country shall commit to uphold intellectual property protections related to COVID-19 vaccines under the Agreement on Trade-Related Aspects of Intellectual Property Rights of the World Trade Organization.

(c) **CONSULTATION.**—The Secretary of State shall, as appropriate, consult with the Secretary of Health and Human Services in carrying out this section.

(d) **CLARIFICATION.**—The United States Trade Representative shall not approve any measure to waive provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights protecting intellectual property rights related to COVID-19 vaccines provided under this section.

(e) **AUTHORIZATION OF APPROPRIATIONS.**—There is authorized to be appropriated to carry out this section, \$25,000,000,000 for fiscal year 2021, to remain available until September 30, 2024.

SA 1818. Mr. PORTMAN (for himself and Mr. CARPER) submitted an amendment intended to be proposed to amendment SA 1502 proposed by Mr. SCHUMER to the bill S. 1260, to establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes; which was ordered to lie on the table; as follows:

At the end of title III of division F, add the following:

SEC. 6302. BRIEFING ON REPORT RELATED TO PROCESS FOR EXCLUDING ARTICLES IMPORTED FROM THE PEOPLE'S REPUBLIC OF CHINA FROM CERTAIN DUTIES IMPOSED UNDER SECTION 301 OF THE TRADE ACT OF 1974.

Not later than 90 days after the publication by the Comptroller General of the United States of the report requested by Congress on July 16, 2019, for an audit into the process by which the United States Trade Representative has excluded articles imported from the People's Republic of China from certain duties imposed under section 301 of the Trade Act of 1974 (19 U.S.C. 2411), the Trade Representative, or a designee of the Trade Representative, shall brief the Committee on Finance of the Senate and the Committee on Ways and Means of the House of Representatives on the manner in which the Trade Representative is responding to the findings contained in that report.

SA 1819. Mr. PORTMAN (for himself, Mr. COONS, Mr. SCHATZ, Mr. WHITEHOUSE, and Mr. BURR) submitted an amendment intended to be proposed by him to the bill S. 1260, to establish a